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(71)Applicant : DAI<sup>Q</sup> PAPER CORP  
DAIO PAPER CONVERTING KK

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(72)Inventor : SAIGA HIDEKI

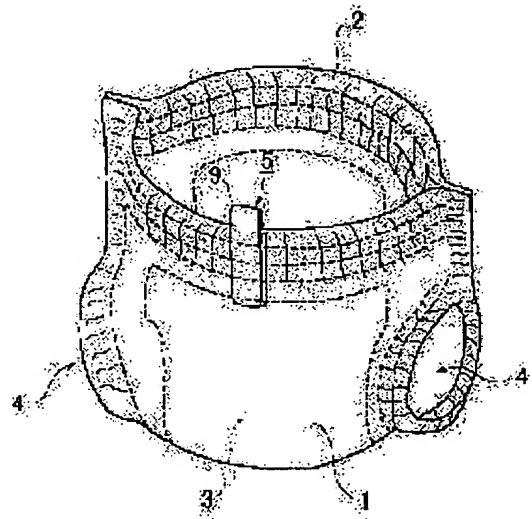
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## (54) BRIEFS TYPE DISPOSABLE PAPER DIAPER

### (57)Abstract:

PROBLEM TO BE SOLVED: To easily pick an abandoning fastening tape, and easily fix a paper diaper from a roundly crumpled state.

SOLUTION: In this disposable paper diaper formed in an briefs shape by thermally welding both side edge parts of the front body and the rear body by folding up a paper diaper constituting sheet material for interposing an absorber 3 between a body side liquid permeable top sheet 2 and an outside surface side back sheet 1 so as to overlap the front body and the rear body with a lengthwise directional central part as a fold line position, at least a picking part 9 is installed in a waist opening edge part of the rear body in a state of projecting outside more than the waist opening edge in a state of folding up a thin belt-like abandoning fastening tape 5.



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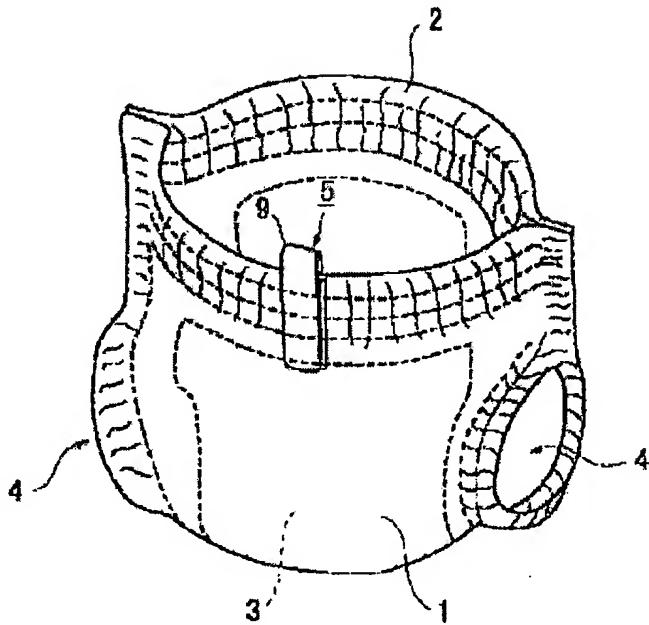
**BRIEFS TYPE DISPOSABLE PAPER DIAPER**

**Patent number:** JP2001178777  
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**Inventor:** SAIGA HIDEKI  
**Applicant:** DAIO SEISHI KK; DAIOO PAPER CONVERTING KK  
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**Application number:** JP19990370094 19991227  
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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] This invention relates to the trousers mold disposable disposable diaper which equipped the back bodice with the firm attachment tape for abandonment.

**[0002]**

[Description of the Prior Art] Conventionally, a diaper detached building is promoted, or an adult is released from wearing using a firm attachment tape each time, and the commercial scene is provided with the trousers mold disposable disposable diaper with the tape mold disposable disposable diaper for the purpose of facilitating wearing.

[0003] As shown in drawing 6, while this trousers type of disposable diaper arranges the elastic flexible members 51 and 52 at the waist parts of anterior part and a posterior part for example, on the non-liquid-permeable nature backseat 50 which consists of polyethylene etc. The 1st elastic flexible member 53 which followed F edge involving the lower part of a product disposable diaper at the past time of the circumference of the foot of another side from F edge at the past time of the circumference of one foot, The 2nd elastic flexible member 54 which followed the back bodice B edge of the circumference of the foot of another side involving the length-from-the-crotch-to-the-cuff part of a product disposable diaper from the back bodice B edge of the circumference of one foot is arranged. Arrange an absorber 55 on this non-liquid-permeable nature backseat 50, and the liquid permeability top sheet 56 is further piled up on this. It considers as a trousers type disposable diaper by joining the edges-on-both-sides part which folded up and folded up to the cross direction what was beforehand formed in the shape of a sandglass by seal joining or the ultrasonic welding method.

[0004] Abandonment processing of this trousers mold disposable disposable diaper is faced. To JP,8-10305,Y As shown in drawing 7, are the center section of the back bodice B, and it sets in the lower part section of the fixed area of the elastic flexible member 57 of a waist opening edge. The trousers mold disposable disposable diaper equipped with the thin band-like firm attachment tape 59 for abandonment which fixed the end along the vertical direction of a diaper, folded up on the front face of the non-liquid-permeable nature backseat 58 in the state of 3 chip boxes, and was fixed to it is proposed. While rounding off a diaper from a crotch side to a longitudinal direction in abandonment processing, it is made to pull and extend from the condition of having folded up said firm attachment tape 59 for abandonment, and fixes and discards in the condition of having attached firmly to the front face of the non-liquid-permeable nature backseat 58, and having rounded off.

**[0005]**

[Problem(s) to be Solved by the Invention] however, in the case of said firm attachment tape 59 structure for abandonment Since the firm attachment tape 59 for abandonment is fixed to the lower part section of abbreviation of the fixed area of the elastic flexible member 57, i.e., the center of the back bodice B, In case the tip of the firm attachment tape 59 for abandonment is made to gather and extend, while there are problems -- it is hard to gather the firm attachment tape 59 for abandonment -- In case it fixes as a condition which rounded off the used diaper, as shown in drawing 8 When a part for the waist

flank 60 was not inserted into the interior rather than the back bodice location where the firm attachment tape 59 for abandonment is being fixed, there was a problem of being unable to attach the firm attachment tape 59 for abandonment firmly to a non-liquid-permeable nature backseat side.

[0006] Moreover, when it was performing reattaching firmly several times, the problem of separating with nature also had the firm attachment tape 59 for abandonment which adhesion reinforcement must have fallen and fixed.

[0007] Then, the main technical problem of this invention is to offer the trousers mold disposable disposable diaper equipped with the firm attachment tape for abandonment could fix easily from the condition which rounded off the disposable diaper, and moreover loses peeling of a firm attachment tape and it enabled it to certainly fix while making the firm attachment tape for abandonment easy to gather.

[0008]

[Means for Solving the Problem] This invention for solving said technical problem The liquid permeability top sheet by the side of the body, The disposable diaper configuration web material to which the absorber intervened between the backseats by the side of external surface is folded up so that past time and a back bodice may lap considering a longitudinal direction center section as a bend line location. In the disposable disposable diaper used as the trousers mold by carrying out heat welding of the edges-on-both-sides section of said past time and a back bodice It is characterized by having attached, where the thin band-like firm attachment tape for abandonment is folded up as a condition of having gathered at least at the waist opening edge of said back bodice, and having made the section projecting outside rather than a waist opening edge at it.

[0009] In this case, said firm attachment tape for abandonment The fixed part pasted up on a disposable diaper at exfoliation impossible, and the middle folding section which follows a longitudinal direction from this fixed part, and it is prepared and is pasted up possible [ exfoliation on the external surface of said fixed part ] in the condition of having folded up, While pasting the external surface of said middle folding section possible [ exfoliation ] in the condition of having followed the longitudinal direction, and having prepared and folded up from this middle folding section, what consists of the tip firm attachment section which gathers to a point and has the section is used suitably. Moreover, in order to soften the hit by the skin, as for said knob section, it is desirable to have performed R processing to the point-angle section, or to have processed the point in the shape of radii.

[0010]

[Embodiment of the Invention] Hereafter, it explains in full detail, referring to a drawing about the gestalt of operation of this invention.

[0011] It is a \*\*\*\* perspective view from a tooth-back side about the trousers mold disposable disposable diaper which drawing 1 requires for this invention, and drawing 2 </A> is the important section enlarged drawing showing the structure of the firm attachment tape 5 for abandonment applied to this invention, respectively .

[0012] First, the liquid permeability top sheet 2 which faces the skin of the wearer who consists of a nonwoven fabric etc. as a trousers type disposable diaper is shown in drawing 1 etc., The endocyst of the semi-rigid absorber 3 which made curdy pulp the subject and prepared the absorbent paper etc. as occasion demands between the non-liquid-permeable nature backseats 1 which consist of polyethylene etc. is carried out. What the crevices 4 and 4 for foot opening formation were formed, respectively, namely, was formed in the edges-on-both-sides section in the shape of an abbreviation sandglass as a result in the state of expansion is folded up by the cross direction by making longitudinal direction middle into the broken line section. The edges on both sides of the folded-up past time and a back bodice are manufactured as a disposable diaper of the trousers type which is mutually joined by seal joining or ultrasonic welding, and does not have a firm attachment tape.

[0013] In addition, with a non-liquid-permeable nature backseat, the external surface of a disposable diaper cannot be restricted but can also not necessarily use an external surface side as a nonwoven fabric by preparing in one the body backseat which consists of a backseat nonwoven fabric for insides, and a backseat nonwoven fabric for external surface in the outside of said non-liquid-permeable nature backseat 1. In addition, this disposable diaper configuration is indicated by Japanese Patent Application

No. No. 268557 [ 11 to ] etc. Anyway, it considers as double fold bordering on a longitudinal direction center section at a cross direction, where leg opening is formed in the both-sides section, it is mutually joined to the joining approaches, such as seal joining or ultrasonic welding, and the disposable diaper produced in the shape of an abbreviation sandglass in the state of expansion is fabricated by the trousers mold.

[0014] In this trousers mold disposable disposable diaper, as shown in drawing 1, where it gathered at least to the abbreviation mid gear of a back bodice and the section is made to project outside rather than a waist opening edge to it, the firm attachment tape 5 for abandonment is formed.

[0015] As said firm attachment tape 5 for abandonment is shown in a detail at drawing 2 (B) While being joined to the tip side of the fixed part 6 which has a glue line 10 in a disposable diaper side side, and is pasted up on exfoliation impossible at the waist opening edge of the tooth-back side center section of the disposable diaper, and this fixed part 6 While being joined to the tip side of the middle folding section 7 which has an adhesive layer 11 in a disposable diaper opposite side side, and this middle folding section 7 As it has an adhesive layer 12 in a disposable diaper side side, and it is turned up by the duplex, and the point is the firm attachment tape which consists of the tip firm attachment sections 8 which form the knob section 9 and is shown in drawing 2 (A) At the time of intact, it is turned up in the boundary section of said fixed part 6 and the middle folding section 7. The adhesive layer 11 of the middle folding section 7 pastes the external surface of said fixed part 6 possible [ exfoliation ], and is further turned up in the boundary section of said middle folding section 7 and the tip firm attachment section 8, and the adhesive layer 12 of the tip firm attachment section 8 has pasted the external surface of said middle folding section 7 possible [ exfoliation ]. However, said knob section 9 is in the condition of having projected to the exterior side rather than the waist opening edge. In addition, it is desirable to perform exfoliation processing to the external surface of the fixed part 6 which said adhesive layer 11 piles up, and the external surface of the middle folding section 7 which said adhesive layer 12 piles up.

[0016] Various things can be used if it is the ingredient which has sufficient tensile strength, such as a film, paper, nonwoven fabrics, or these layered products, and has flexibility as a tape base material of said fixed part 6, the middle folding section 7, and the tip firm attachment section 8. As a raw material of a film and a nonwoven fabric, polyester system resin, such as polyolefine system resin, such as polypropylene, polyethylene, and polystyrene, polyethylene terephthalate, and polybutylene terephthalate, polyamide system resin, polyurethane system resin, etc. can be used. Moreover, about said knob section 9, in order to soften the hit by the skin, it is desirable to drop an angle, or to carry out decision processing at the shape of radii, as shown in drawing 4 (B) as shown in drawing 4 (A).

[0017] On the other hand, about a binder, a thing equivalent to the binder currently used in the FASUNINGU tape of the conventional tape mold disposable diapers, such as a rubber system binder and an acrylic binder, can be used.

[0018] In discarding a used disposable diaper, after tearing the welding of the edges-on-both-sides section from a wearing condition and removing from the body, as shown in drawing 3 (A) After rounding off a disposable diaper from a crotch side in the condition of having made it double fold, gather and fold up the knob section 9 of said firm attachment tape 5 for abandonment, and a straight-line condition is made to extend from a condition. If the firm attachment tape 5 for abandonment is made to wind so that the disposable diaper then rounded off may be made to go around, as shown in drawing 3 (B), the condition of having attached firmly the adhesive layer 12 of the tip firm attachment section 8 to disposable diaper external surface, and having rounded off it is fixed.

[0019] Since it is considering as the structure which has arranged the firm attachment tape 5 for abandonment near the waist opening edge, in the case of the firm attachment tape structure for abandonment concerning this invention, the disposable diaper rounded off mostly is carried out 1 round, it can attach firmly now to it, and the condition of having rounded off the disposable diaper can certainly be fixed to it.

[0020] By the way, as long as said knob section 9 fulfills the conditions projected to the exterior of a waist opening edge in the state of folding, various structural changes are possible for the structure of said firm attachment tape 5 for abandonment. For example, firm attachment tape 5A for abandonment

shown in drawing 5 constitutes a fixed part 6, the middle folding section 7, and the tip firm attachment section 8 with the thin band-like tape base material 13 of one sheet. Moreover, although it will be thought that it is enough if it usually prepares in one mid gear of a back bodice, you may make it form the firm attachment tapes 5 and 5A for abandonment mentioned above two or more.

[0021]

[Effect of the Invention] Above, as detailed explanation, according to this invention, since a disposable diaper does not exist outside a fixed part in the condition of having made it extending since the knob section has projected outside the waist opening edge while being able to make it easy to gather the tape for firm attachment for abandonment, and to extend, it can fix easily from the condition which rounded off the disposable diaper. And since it can attach firmly in the condition of having made it going around mostly since extension was long, peeling of a tape is lost and it can certainly fix.

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## DESCRIPTION OF DRAWINGS

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**[Brief Description of the Drawings]**

[Drawing 1] It is a \*\*\*\* perspective view from a tooth-back side about the trousers mold disposable disposable diaper concerning this invention.

[Drawing 2] (A) which shows the structure of the firm attachment tape for abandonment concerning this invention is a fold-up condition side elevation, and (B) is an extended condition side elevation.

[Drawing 3] The perspective view showing the cancellation point in which (A) shows a procedure (the 1), and (B) are the side elevations showing a procedure (the 2).

[Drawing 4] It is drawing showing the tip processing point of the knob section 9.

[Drawing 5] (A) which shows the modification of the firm attachment tape structure for abandonment concerning this invention is a fold-up condition side elevation, and (B) is an extended condition side elevation.

[Drawing 6] It is the expansion state diagram showing the conventional trousers mold disposable disposable diaper structure.

[Drawing 7] It is the disposable diaper perspective view showing the conventional example for abandonment of firm attachment tape anchoring.

[Drawing 8] It is drawing showing the abandonment point.

**[Description of Notations]**

1 [ -- The crevice for foot opening formation 5 and 5A / -- The firm attachment tape for abandonment, 6 / -- A fixed part, 7 / -- The middle folding section, 8 / -- The tip firm attachment section, 9 / -- The knob section, 10-12 / -- Adhesive layer ] -- A non-liquid-permeable nature backsheet, 2 -- A liquid permeability top sheet, 3 -- An absorber, 4

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] The disposable diaper configuration web material to which the absorber intervened between the liquid permeability top sheet by the side of the body and the backseat by the side of external surface is folded up so that past time and a back bodice may lap considering a longitudinal direction center section as a bend line location. In the disposable disposable diaper used as the trousers mold by carrying out heat welding of the edges-on-both-sides section of said past time and a back bodice The trousers mold disposable disposable diaper characterized by having attached where the thin band-like firm attachment tape for abandonment is folded up as a condition of having gathered at least at the waist opening edge of said back bodice, and having made the section projecting outside rather than a waist opening edge at it.

[Claim 2] The fixed part which pastes up said firm attachment tape for abandonment on a disposable diaper at exfoliation impossible, The middle folding section which follows a longitudinal direction from this fixed part, and it is prepared and is pasted up possible [ exfoliation on the external surface of said fixed part ] in the condition of having folded up, The trousers mold disposable disposable diaper according to claim 1 which consists of the tip firm attachment section which gathers to a point and has the section while pasting the external surface of said middle folding section possible [ exfoliation ] in the condition of having followed the longitudinal direction, and having prepared and folded up from this middle folding section.

[Claim 3] Said knob section is a trousers mold disposable disposable diaper given in claim 1 and either of two into which R processing is performed to the point-angle section, or the point is processed in the shape of radii.

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[Translation done.]